

# Luis Angel Guerrero Hoyos

University of Washington, MSc Civil Engineering

## Professional Summary

Master of Science Student at CEE department of the University of Washington, focusing on Geotechnical Engineering and Remote Sensing. Bachelor's degree in Geological Engineering from Universidad Nacional de Colombia, School of Mines. 5 years of experience in industry. He is into both learning autonomously and by teamwork, has excellent interpersonal, written, and communication skills, is adaptable to change with constant improvement wishes, creative and innovative mindset focused on problem-solving, committed, and responsible with his duty. Finally, he is passionate about geospatial data, GIS, remote sensing, geotechnical engineering, risk management, geophysics, and data analysis.

## Work History

### Geotechnical Monitoring Analyst (2 years)

Hexagon Mining, Baranquilla, Colombia – Belo Horizonte, Brazil.

Real-time geotechnical monitoring of pit slopes and tailing dams using Ground-Based Interferometric radars, total stations, and GNSS; technical support to the customer regarding monitoring, equipment, system, software, and back analysis; report hazardous areas and hotspots, notify the customer following the procedure; daily, weekly, and monthly completion of reports to the customer.

### Field Geologist (2 months)

Listos SA – South32, Montelibano, Córdoba, Colombia.

Grade and dilution control field geologist at Cerro Matoso mine (South32 group). Follow excavation fronts to ensure the orebody extraction and stockpile construction by the given forecast. Ensure the planned geochemical and tonnage specifications of the consumption pile.

### Junior Geologist (2.5 years)

Independence Water and Mining – South32, Montelibano, Córdoba, Colombia.

Supervise, coordinate, short planning and execute RC drilling programs, ensuring the sampling QA/QC, geologically log of RC chips and manage databases through acQuire (data entry and ArcGIS) for South32 group at Cerro Matoso mine. This information would help geologist specialists create both resources and grade control models.

### Engineering Geologist Intern (6 months)

Mining Secretaryship, Medellín, Antioquia, Colombia.

Control and monitoring of mining titles in Antioquia, ensure that mining obligations are met according to the Colombian mine code or Law 685 of 2001.

### Research Assistant - Engineering Geologist (6 months)

Universidad Nacional de Colombia, Medellín, Antioquia, Colombia.

Assist cartographic mapping at “hazard basic studies for landslides, floods and torrential flows in Caldas, La Estrella, Envigado, Itagüí, Bello, Copacabana and Barbosa” project, to incorporate in risk management of land management, Antioquia, Colombia.

## Education

Master's degree in Civil Engineering, specialization in Geotechnical Engineering

University of Washington, WA, US.

Bachelor's degree in Geological Engineering

Universidad Nacional de Colombia, Faculty of Mines, Medellín, Antioquia, Colombia.

## Conferences & Courses

- 2020 Online Geotechnical Radar Monitoring Course – University of Arizona – Attendant

- Tunnelling and Underground Structures Andin Seminar (2018) – Attendant

- XIII Technical Week of Geology and Geological Engineering – Expositor

## Research

- Guerrero, L. A., & Giraldo, E. V. A. (2019). Estimación y análisis de umbrales críticos de lluvia para la ocurrencia de avenidas torrenciales en el Valle de Aburrá (Antioquia). Journal EIA, 16(32), 97-111. DOI: 10.24050/reia.v16i32.1281.



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## Skills

- Remote Sensing
- GIS
- Geotechnical Engineering-Monitoring
- Risk Management
- Communication
- Leadership
- Adaptability
- Innovation



## Software

- GIS (ArcGIS – QGIS)
- Ground-Based InSAR
- LiDAR – SfM – GNSS (Pix4D, CloudCompare)
- Python (Gdal, Rasterio, Geopandas)
- Matlab
- AcQuire databases
- Rocscience
- Plaxis
- AutoCAD
- Microsoft Package (PowerBI)



## Languages

★★★ English

★★★ Spanish